UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,824	09/13/2000	Alan Rowe	103.1046.01	7793

22883	7590	06/15/2006

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EXAMINER
HOANG, PHUONG N

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/660,824	ROWE, ALAN
Office Action Summary	Examiner	Art Unit	
	Phuong N. Hoang	2194	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2006*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 11, 13 – 32, 34 - 42, and 48 – 51* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 – 11, 13 – 32, 34 - 42, and 48 – 51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 11, 13 – 32, 34 - 42, and 48 – 51 are pending for examination.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   **Claims 1 – 4, 8, 16, 21 – 25, 29, 37, and 42 are rejected under 35**

U.S.C. 103(a) as being unpatentable over French, US patent no. 6,341,312 in view

of Kampe, Pub. No. US 20020002448.

4.   French and Kampe were cited in the last office action.

5.   **As to claim 1**, French teaches a method of operating a file server, comprising

the steps of:

        receiving a CIFS request at the file server (CIFS client access network devices

located on servers, col. 3 lines 25 – 50);

recording a state at the file server at the time of the receiving the request (the per

server session structure 58 maintains state information with respect to the server to

which the user is connecting, col. 5 lines 1 - col. 6 line 10) the state including

information regarding a persistent connection between the server and a client device;

restoring the state of the file server upon reboot as last recorded (reconnect

without requiring the user to re-enter information, col. 5 and col. 6 lines 1 – 26);

attempting to continue the CIFS session between at least one client device and

the file server that the request was part of (reestablish the connections, replays the

connections, col. 6 lines 20 – 48)., wherein the recording and restoring are transparent

to the client (transparent to the user's awareness, col. 6 lines 20 – 27).

French does not explicitly teach wherein the step of recording state further

comprises the step of determining whether recovery will be accomplished by rebooting

the affected server.

Kampe teaches the step of determining whether recovery will be accomplished

by rebooting the affected server (after the components fail-overs have taken place and

result in a node reboot, [0048 – 0049, 0054 – 0055, 0062, 0065] and figures 4 and 5)

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to apply the teaching Kamp to French's system because Kampe

would provide many solutions to fix the server when it is down.

6. **As to claim 2,** French teaches the steps of acknowledging receipt of the CIFS

request; processing the CIFS request (session establishment request is stored

...."permanent", col. 6 lines 5 – 10).

7. **As to claim 3,** French teaches the step of recording state includes determining

automatically whether the processing of a CIFS request is at a point where the state can

be reliably recorded (it is inherent in maintaining the state information).

8. **As to claim 4,** French teaches the step of recording state occurs at points based

or the progress of processing of a CIFS request (CIFS, col. 3 lines 25 – 50).

9. **As to claim 8,** French teaches the step of recording state further comprises the

step of determining whether the server shutdown was elective or non-elective (an

interrupt .... test outcome is negative or positive, col. 6 lines 10 – 20).

10. **As to claim 16,** see rejection for claim 12 above.

11. **As to claim 21,** French teaches the step of replaying the connection would be

obvious the system continues to run and complete remaining portion of the

uncompleted request.

12.   **As to claim 22,** this is the apparatus claim of claim 1. See rejection for claim 1

above.

13.   **As to claims 23 – 25,** see rejection for claims 2 – 4 above.

14.   **As to claim 29,** see rejection for claim 8 above.

15.   **As to claim 37,** see rejection for claims 16 above.

16.   **As to claim 42,** see rejection for claim 21 above.

17.   **Claims 5 - 7, 9 – 11, 13 – 15, 17 - 20, 26 - 28, 30 – 32, 34 – 36, and 38 – 41 are**

rejected under 35 U.S.C. 103(a) as being unpatentable over French, US patent no.

6,341,312 in view of Kampe, Pub. No. US 20020002448, and further in view of

Delaney, US patent no. 5,996,086.

18.   Delaney reference was cited in the last office action.

19.   **As to claim 5,** French does not explicitly teach the step of wherein the state is

recorded to a non-volatile storage.

Delaney teaches the step of the information is stored in the non-volatile storage

(the non- volatile storage of each server is used to store identification information,

specific to the fail-over servers, col. 4 lines 42 – 65).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of French and Delaney's system because

the non-volatile memory storage is necessary for the server to maintain the system

information when the power is off.

20.   **As to claims 6 and 7,** French modified by Delaney teaches the steps of

recording state occurs as part of an elective reboot (Delaney; fo_mode_stop, col. 7 lines

5 – 65 and col. 9 lines 55 - 65) or elective takeover of a server further comprising:

ignoring current CIFS requests (one of ordinary skill in the art can recognize that

the current request should be temporarily ignored after the system shutdown and before

trying to process all active requests);

processing all active CIFS requests (Delaney; resume messages, col. 9 lines 55

– 65);

recording state (French; col. 5 lines 35 – 42).

21.   **As to claim 9,** French modified by Delaney teaches the step of determining

whether the server shutdown is elective or non-elective is a function of a flag (test

outcome, col. 6 lines 10 – 20) value stored in the non-volatile storage.

22.   **As to claims 10 and 11,** French teaches the step of the flag value indicates the

server shutdown was elective (positive or negative, col. 6 lines 10 – 20) or non-elective.

23.   **As to claim 13,** French modified by Delaney teaches the step of recording state

further comprises the step of determining whether recovery will be accomplished by

rebooting the affected server (the machine is rebooted, col. 6 lines 40 – 45) is a function

of the flag value (the test outcome, col. 6 lines 10 – 20) is stored in the non-volatile

storage.

24.   **As to claim 14,** French teaches the step of the flag value indicates the recovery

will be accomplished by rebooting the affected server (if the outcome is positive, the

routine reconnect the client to the server, col. 6 lines 15 - 45).

25.   **As to claim 15,** French does not teach the step of wherein the flag value

indicates the recovery will be accomplished by takeover by another server.

        Delaney teaches the step of the flag value indicates the recovery will be

accomplished by takeover by another server (flag fo_mode_fail_over, col. 7 lines 5 –

col. 8 lines 10).

        It would have been obvious to combine the teaching of French and Delaney's

system because Delaney would provide a back up server to keep the system up running

and providing services when a system failure occurs.

26.   **As to claim 17,** see rejection for claim 13 above.

27.   **As to claim 18,** French teaches wherein the reboot comprises the steps of:

rebooting the affected server's operating system (the machine is rebooted, col. 6

lines 40 – 45); and

rebuilding in-memory data structures (inherent when the data structures is saved

in a disk such that when the machine is rebooted, col. 6 lines 40 – 48) to the state prior

to the reboot.

28.   **As to claim 19,** French modified by Delaney teaches the step of wherein the

rebuilding in-memory data structures further comprises fetching the state stored in the

non-volatile storage (Delaney; non-volatile storage, col. 4 lines 42 – 65) to rebuild the in-

memory data structures (French; inherent when the data structures is saved in a disk

such that when ..... rebooted, col. 6 lines 40 – 48).

29.   **As to claims 20,** French modified by Daleney teaches wherein the takeover

(Delaney, failover, col. 8 lines 1 – 10) comprises fetching the stored in the non-volatile

storage (inherent) and rebuilding the in-memory data structures in another server using

the state (French; one of the ordinary skill in the art can recognize that the data

structures has to be rebuild in the in-memory in another server that has to be server

trusted).

30.   **As to claim 26,** see rejection for claim 5 above.

31.   **As to claims 27 – 28,** see rejection for claims 6 – 7 above.

32.   **As to claim 30,** French modified by Delaney teaches the step of determining

whether the server shutdown is elective or non-elective is a function of a flag (French;

test outcome, col. 6 lines 10 – 20) value; the information is stored in the non-volatile

storage (Delaney; the non- volatile storage of each server is used to store identification

information, specific to the fail-over servers, col. 4 lines 42 – 65).

33.   **As to claims 31 and 32,** French teaches the step of the flag value indicates the

server shutdown was elective (positive or negative, col. 6 lines 10 – 20) or non-elective.

34.   **As to claims 34,** see rejection for claim 13 above.

35.   **As to claims 35,** see rejection for claim 14 above.

36.   **As to claim 36,** see rejection for claim 15 above.

37.   **As to claims 38,** see rejection for claim 17 above.

38.   **As to claims 39 - 40,** see rejection for claims 18 - 19 above.

39.   **As to claim 41,** see rejection for claim 20 above.

40.   **Claims 48, 49, and 51 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Delaney, US patent no. 5,996,086 in view of French, US patent

no. 6,341,312.

41.   **As to claim 48,** Delaney teaches the non-volatile memory having storage

capable of holding information, the information including the steps of:

Information identifying the state of a first device (status of the servers, col. 6 lines

19 – 25); and

information identifying a flag value, the flag value indicating a previous operating

mode identifying an elective reboot of the first device to be affected (identification

information includes a flag .... To be booted and fo_mode_stop .... operator requested

reboot, col. 7 lines 5 – col. 8 lines 57).

Delaney does not teach the step of attempting to continue any active CIFX

sessions.

. French teaches the step of attempting to continue any active CIFS sessions

(reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and

col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Delaney and French's system because

French's CIFS session would provide an additional choice of protocols to the network

for more flexibility and variety of means for accessing to the network system.

42.   **As to claim 49**, Delaney teaches the non-volatile memory having storage

capable of holding information, the information including the steps of:

Information identifying the state of a first device (status of the servers, col. 6 lines

19 – 25); and

information identifying a flag value, the flag value indicating a previous operating

mode identifying an non-elective reboot of the first device to be affected (identification

information includes a flag .... To be booted, and fo_mode_stop .... Detected failure,

col. 7 lines 5 – col. 8 lines 57).

Delaney does not teach the step of attempting to continue any active CIFX

sessions.

French teaches the step of attempting to continue any active CIFS sessions

(reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and

col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Delaney and French's system because

French's CIFS session would provide an additional choice of protocols to the network

for more flexibility and variety of means for accessing to the network system.

43.   **As to claim 51,** Delaney teaches the non-volatile memory having storage

capable of holding information, the information including the steps of:

Information identifying the state of a first device (status of the servers, col. 6 lines

19 – 25); and

information identifying a flag value, the flag value indicating a previous operating

mode identifying an non-elective takeover of the first device by the second device

(identification information includes a flag, and fo_mode_fail indicates that the remote

server has failed and its network services are being provided by another remote server,

col. 7 lines 5 – col. 8 lines 10).

Delaney does not teach the step of attempting to continue any active CIFX

sessions.

French teaches the step of attempting to continue any active CIFS sessions

(reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and

col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Delaney and French's system because

French's CIFS session would provide an additional choice of protocols to the network

for more flexibility and variety of means for accessing to the network system.

44.   Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delaney, US patent no. 5,996,086 in view of Edmonds, US patent no. 6,397,345, and further in view of French, US patent no. 6,341,312.

45.   Edmonds was cited in the last office action.

46.   **As to claim 50**, Delaney teaches the non-volatile memory having storage capable of holding information, the information including the steps of:

information identifying the state of a first device (status of the servers, col. 6 lines 19 – 25); and

information identifying a flag value, the flag value indicating a previous operating mode (identification information includes a flag ....op_mode, col. 7 lines 5 – col. 8 lines 57).

Delaney does not teach the step of the mode includes elective takeover, and attempting to continue any active CIFX sessions.

Edmonds teaches the step of an elective takeover of the first device by a second device (fail-over ... finding another server that can perform the same service, col. 1 lines 40 - 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Delaney and Edmonds's system because Edmonds's elective takeover step would provide the takeover server a choice to takeover the failed server, and to keep the system up running for efficiently.

Delaney and Edmonds do not teach the step of attempting to continue any active CIFX sessions.

French teaches the step of attempting to continue any active CIFS sessions (reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and col. 3 lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Delaney, Edmonds, and French's system because French's CIFS session would provide an additional choice of protocols to the network for more flexibility and variety of means for accessing to the network system.

Allowable Subject Matter

47.   Claim 1 amended to include the limitations as recited in both claims 6 and 8 would be allowable over the prior art of record. However, at present claim 1 is rejected, as are claims 6 and 8, separately.

Response to Arguments

48.   Applicant's arguments filed on 3/21/06 with respect to claims 1 – 11, 13, 32, and 34 – 42 have been considered but are not persuasive.

49.   Applicant argued in substance that

(1)   French and Kamp do not teach incoming CIFS requests must be rejected or ignored and current-in process CIFS requests must be flushed.

(2)   French is silent to teaching recording state at points based on the progress of a CIFS request.

(3)   As to claims 48, 49, and 51, applicant does not see the flag in Delany indicates elective or non-elective of a first device. Applicant's invention requires flushing active CIFS requests and placing pending requests on hold. There is no indication of an election to reboot. It is impermissible to consider that the combination of Delaney and French teach an elective shutdown while maintaining a persistent connection.

(4)   As to claim 50, Edmonds appears to provide a failover not takeover.

50.   Examiner respectfully disagreed with applicant's remark

As to point 1, French teaches and reconnect and replaying the connection (reconnect without requiring the user to re-enter information and replay the connection, col. 5 and col. 6 lines 1 – 47). One of ordinary skill in the art can recognize that the current request should be temporarily ignored after the system shutdown and before trying to process all active requests.

As to point 2, French teaches CIFS request (col. 3 lines 25 – 55).

As to point 3, examiner does not see in claims 48, 49, and 51 claiming a

persistent connection mechanism and placing pending requests on hold.   Similarly

examiner does not see that the claims 48, 49, and 51 claiming elective shutdown while

maintaining a persistent connection. Delany teaches the elective reboot (fo_mode_stop

are the result on operator requested reboot, col. 8 lines 46 – 55), non-elective reboot

(fo_mode_fail indicates that the remote server has failed and its network services are

being provided by another remote server, col. 8 lines 1 – 10), and elective takeover

(fo_mode_failover indicates that the remote server has failed and its network services

are being provided by the local server, col. 8 lines 1 – 10).   It is the combination of

Delaney and French, not any alone, teaches the claimed limitation. Examiner cited

French for teaching the step of attempting to continue any active CIFS sessions

(reestablish the connections, replays the connections, col. 6 lines 20 – 48 and col. and

col. 3 lines 25 - 60). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to combine the teaching of Delaney and French's system

because French's CIFS session would provide an additional choice of protocols to the

network for more flexibility and variety of means for accessing to the network system.

As to point 4, finding another server that can perform the same service of the

failed server or takeover the service has the same meaning.

Conclusion

51.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

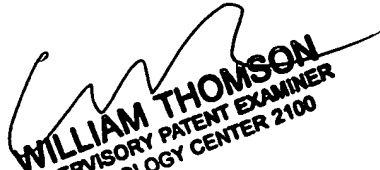than SIX MONTHS from the mailing date of this final action.

52.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Phuong N. Hoang whose telephone number is

(571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to

5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Thomson can be reached on 571-272-3718. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Ph
June 9, 2006

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